

Claims

- 5 1. A method for marking food products, attesting to their authentication, that includes the step of –
winding (wrapping) a marking tag that comprises a band (also known as “cable tie”), that wraps around at least a sector of the product designated to be marked.
- 10 2. The method for marking food products, attesting to their authentication in accordance with claim 1, wherein –
said method is implemented for specifically marking "Kosher" food attributes.
- 15 3. The method for marking food products, attesting to their authentication in accordance with claim 2, wherein –
said method is implemented for marking Kosher status on chunks of poultry meat.
- 20 4. The method for marking food products, attesting to their authentication in accordance with claim 1, wherein –
said method is implemented in a production line for processing food products, and said line comprises a conveyer upon which the food products are handled, and wherein the winding of the marking tags is accomplished without arresting the operation of neither said production line nor the conveyer.
- 25 5. The method for marking food products, attesting to their authentication in accordance with claim 1, wherein –
said method comprises, in addition, a step of –
piercing an opening in the product intended for being marked, therefore enabling to thread through it said band (“cable tie”), and whereby enabling to wrap only a portion of said product.

6. The method for marking food products, attesting to their authentication in accordance with claim 1, wherein said method comprises, in addition, a step of –
- connecting a hologram unto said band (cable tie).
- 5 7. The method for marking food products, attesting to their authentication in accordance with claim 6, wherein -
- the steps of wrapping said tags and connecting said hologram are executed by a process that includes the stages of –
- 10 positioning an automatic device for wrapping bands (cable ties) and an anvil means, along the flank of the product intended to be marked ; and
- coupling said anvil means unto the surface of said product intended to be marked; and
- 15 advancing said automatic device for wrapping bands (cable ties) to a position in which it will engage said product while said anvil means is attached to said product; and
- winding (wrapping) said band around the product and the anvil; and
- feeding a hologram to a position located between a said welding means tip and said band; and
- 20 advancing said welding means towards said anvil means, and welding said hologram unto said band (tie cable); and
- retreating said welding means backwards; and
- extracting said anvil from between the product and said band.
8. The method for marking food products, attesting to their authentication in accordance with claim 7, wherein –
- 25 positioning said automatic device for wrapping bands is carried out from one side of the product whereas said anvil means is located on said product's other side.

9. The method for marking food products, attesting to their authentication in accordance with claim 7, wherein –
- the act of advancing said automatic device for wrapping bands, comprises the piercing of the product intended to be marked; and wherein –
- 5 winding (wrapping) said band around the said product and the said anvil is executed through the aperture formed by said piercing.
10. A tag for marking meat or fish products attesting to their authentication, whereby said tag comprises –
- a band (cable tie); and
- 10 a hologram connected unto said band.
11. The tag for marking meat or fish products attesting to their authentication in accordance with claim 10, wherein –
- said hologram is made of a polymeric foil.
12. The tag for marking meat or fish products attesting to their authentication in accordance with claim 11, wherein –
- 15 said polymeric foil, from which said hologram is made up, is connected to said band by welding.
13. The tag for marking meat or fish products attesting to their authentication in accordance with claim 12, wherein –
- 20 said welding is preformed by an ultra sonic technology welding.
14. The tag for marking meat or fish products attesting to their authentication in accordance with claim 10, wherein –
- said hologram is connected to said band by using either one of the means taken from a group consisting of - threading it into the band, a rivet,
- 25 heat welding and gluing.
15. The tag for marking meat or fish products attesting to their authentication in accordance with claim 10, wherein –

said hologram is connected unto said band so that it forms an integral part of it.

16. The tag for marking meat or fish products attesting to their authentication in accordance with claim 10, wherein –

5 said tag is applied in order to vouch for the product "Kosher" status.

17. An assembly for marking meat or fish food products, attesting to their authentication, that comprises –

10 an automatic device for wrapping bands (cable ties) for wrapping a band (tie cable) around at least a sector of the product intended to be marked; and

 a feeding means for feeding said marking tag towards the product intended to be marked; and

 a welding means for welding said tag unto said band; and

15 an anvil means for providing a counter directed support against said welding means, at the time the tag is welded unto said band.

18. The assembly for marking meat or fish products attesting to their authentication in accordance with claim 17, wherein –

 said tag is a hologram.

20 19. The assembly for marking meat or fish products attesting to their authentication in accordance with claim 17, wherein –

 said tag is fed as a discrete accessory from a continuous strip of tags, and wherein said feeding means includes, in addition –

 gripper means for holding and applying said tag against said welding means end tip; and

25 a cutting means for cutting said tag out of said continuous strip of tags.

20. An array for marking meat and fish food products, attesting to their authentication, installable as an "add on" configuration into an existing regular processing line of meat or fish products, wherein –

said line comprises a chain based conveyer upon which the products are moving and handled, and wherein said array includes –

a mounting structure; and

a propulsion system installed in said structure; and

5 at least one carriage driven by said propulsion system, in a cyclical motion that is essentially parallel to the of movement of said conveyer's chain; and

10 at least one marking assembly, installable upon said carriage and serving to mark at least one product while it is moving on the chain conveyer, by wrapping a marking tag that includes a band (cable tie) around the circumference of at least a sector of said product.

21. The array for marking meat and fish food products in accordance with claim 20, wherein –

15 said mounting structure includes at least one lengthwise axis, upon which said cyclical movement of said carriage is performed.

22. The array for marking meat and fish food products in accordance with claim 20, wherein –

20 said propulsion system drives said carriage at a speed that is substantially equal to the speed of the chain of said conveyer while said carriage moves in a direction that is parallel to the movement of said conveyer's chain and in the same direction.

23. The array for marking meat and fish food products in accordance with claim 22, wherein said propulsion system includes –

25 a toothed wheel interlaceable with said conveyer's chain, and thus receives the required driving force for the system from said conveyer's chain.

24. The array for marking meat and fish food products in accordance with claim 23, wherein said propulsion system includes, in addition –

at least one cyclical chain positioned along said conveyer chain, under it and in parallel to it, and driven to rotate by said toothed wheel, and

whereby -

a coupling assembly links said cyclical chain to said carriage so that -

- 5 rotation of said cyclical chain causes said coupling assembly to perform a vertical movement that brings about a tilt of said carriage in a direction that detaches it away from said conveyer's chain, and

wherein said tilt lasts as long as said carriage moves in a direction that is opposite to that of said conveyer's chain.

- 10 25. The array for marking meat and fish food products in accordance with claim 20, wherein -

said array includes two of said carriages, each one of them positioned on the other side of said conveyer's chain.

- 15 26. The array for marking meat and fish food products in accordance with claim 20, wherein said marking assembly includes -

an automatic device for wrapping bands (cable ties) for wrapping a band (tie cable's) around at least a sector of the product intended to be marked; and

- 20 a feeding means for feeding said marking tag towards the product intended to be marked; and

a welding means for welding said tag unto said band; and

an anvil means for providing a contra support against said welding means, at the time the tag is welded unto said band.

- 25 27. The array for marking meat and fish food products in accordance with claim 20, wherein the marking array includes in addition -

a control device for detecting the presence of a product on the line and providing its location, in a manner that enables to activate said marking assembly to perform said marking on a product.

a wheel that causes sideways shifting of the product when it passes near it; and

a proximity sensor for detecting said sidewise shift of the product.

29. A method for propelling an assembly for marking food products, attesting to
5 their authentication, while they are riding on a chain conveyer of their food processing line, that includes the step of –

obtaining propulsion drive power as required for driving said marking assembly along said conveyer's chain, directly from said conveyor chain and through direct synchronization with the conveyor's movement.

- 10 30 A method for marking food products, attesting to their authentication, by attaching band (cable ties) to them, while the products are riding on a conveyer of their food processing line, that includes the steps of –

15 driving at least one marking assembly to move alongside and together with the products to be marked, at a speed that is substantially equal to the speed of the conveyer; and

executing the marking operation while the speed of said marking assembly and the speed of the conveyer are substantially equal; and

on the termination of said marking operation –

- 20 disconnecting the marking assembly from the conveyer; and
retreating it backwards along the lengthwise of said conveyer in a cyclical motion, in order to arrive at a subsequent batch of said products intended to be marked.